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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,249	01/08/2004	Kevin P. Klubek	86973RLO	6740

7590 05/02/2006

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/753,249

Applicant(s)

KLUBEK ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 15-17 and 31-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 18-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-16-05; 1-8-04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This Office action is responsive to the response dated April 3, 2006. Applicant elected the oxinoid compound Alq₃ and the anthracene compound shown in the claims 14 and 30 as the first host component. Claims 15-17 and 31-33 are withdrawn as non-elected. Claims 1-14 and 18-30 are presently under consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10, 13, 14, 18-26, 29, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US 5,281,489) in view of Matsuura et al. (US 2005/0064233 A1). Mori teaches an electroluminescent element comprising an organic luminescent layer comprising a mixture of a fluorescent luminescent agent, at least one hole moving and donating agent (also known as hole transporting and injecting) and at least one electron moving and donating agent (also known as electron transporting and injecting). Mori teaches suitable hole moving and donating agents include anthracene compounds and aromatic tertiary amine compounds (see col. 4, lines 41-46). Suitable electron moving and donating agents includes metal complexes of 8-hydroxyquinolines (see col. 8, lines 15-30) with regard to claims 5, 6, 21 and 22. With regard to claims 9, 10, 25 and 26 various coumarin derivatives are taught as the fluorescent agent (see col. 24, lines 3-29). With regard to claims 13 and 29, coumarin is a green emitting material. With regard to claims 8 and 24, the amount of luminescent agent is 0.01-20 parts by weight (see col.

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26, lines 66-68). The weight ratio of electron moving and donating agent to hole moving and donating agent is 95:5 to 5:95 (see col. 27, lines 3-5) with regard to claims 3, 4, 7, 19, 20, and 23.

Mori et al. fails to teach the specific aminoanthracene derivative of claims 14 and 30 as a hole moving and donating agent, but Mori et al. does teach the hole moving and donating agent may be an anthracene derivative and/or tertiary amine derivative (see col. 4, lines 41-46).

Matsuura et al. teaches in analogous art compounds for the luminescent layer according to formula (V) (see par. 23) wherein X is a substituted or unsubstituted condensed aromatic ring group having 10 to 40 nuclear carbon atoms, Ar⁵ and Ar⁶ each independently represent a substituted or unsubstituted monovalent aromatic group having 6 to 40 carbon atoms, and p represents an integer of 1 to 4 (see par. 24-26). Although Matsuura et al. does not specifically set forth the derivative of claims 14 and 30, formula (V) discloses all of the requirements of the claims 14 and 30 compound. It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected the formula (V) derivative of the luminescent layer taught by Matsuura et al. for the hole moving and donating agent of the Mori et al. device, because Mori et al. teaches that an anthracene derivative or tertiary amine derivative is desirable as the hole moving and donating agent.

4. Claims 10-12 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (US 5,281,489) in view of Matsuura et al. (US 2005/0064233 A1) in further view of Chen et al. (US 2004/0247937 A1). Mori et al. and Matsuura et al. are relied upon as set forth above. Mori et al. teaches the fluorescent materials may be chosen from dyes (see col. 23, lines 38-47), but fails to specifically mention quinacridone dyes or specific coumarin derivative C545T. Chen et al. teaches in analogous art luminescent dyes for the luminescent layer of an

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OLED including C545T and quinacridone derivatives (see par. 79). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected either a quinacridone dye (QA) or C545T as the luminescent agent of the Mori et al. device, because Mori et al. teaches a fluorescent dye is desirable as the luminescent agent.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dawn Garrett
Primary Examiner
Art Unit 1774

D.G.
April 27, 2006